

	Current	Δ from YD	Δ from 7D Avg
Nat Gas Prompt	\$ 2.32	▲ \$ 0.01	▼ \$ (0.00)

	Current	Δ from YD	Δ from 7D Avg
WTI Prompt	\$ 37.76	▲ \$ 0.50	▲ \$ 0.4

	Current	Δ from YD	Δ from 7D Avg
Brent Prompt	\$ 40.03	▲ \$ 0.42	▲ \$ 0.1

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- [Nat Gas Options Volume and Open Interest](#)
- [Nat Gas Futures Open Interest](#)
- [Price Summary](#)

### 00z GWDD Change

Cooler Change

Warmer Change

ECMWF Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	0.8	1.0	3.9	5.6
24 Hr Chg	1.8	-1.0	3.2	3.9

GFS Ensemble 00z	1-5 Day	6-10 Day	11-15 Day	Total
12 Hr Chg	1.2	2.9	8.8	12.9
24 Hr Chg	-0.6	2.1	6.5	8.0

	Current	Δ from YD	Δ from 7D Avg
US Dry Production	85.4	▼ -1.73	▼ -2.46

	Current	Δ from YD	Δ from 7D Avg
US Power Burns	34.0	▼ -0.29	▼ -0.60

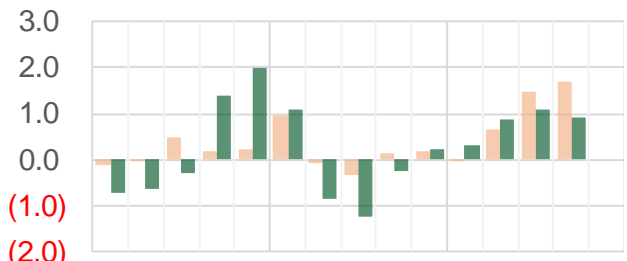
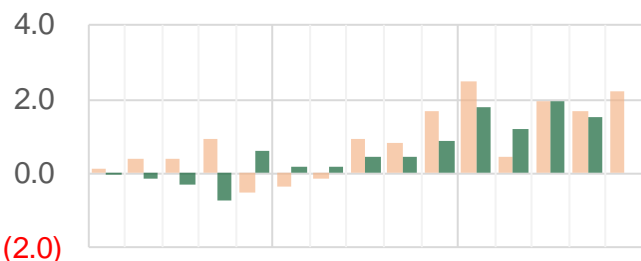
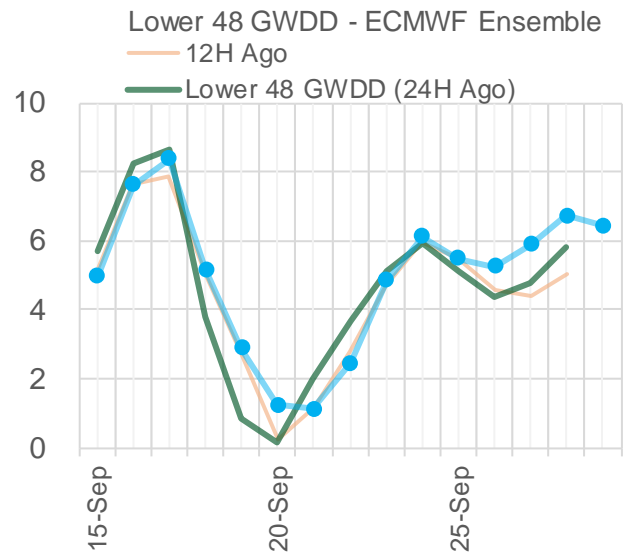
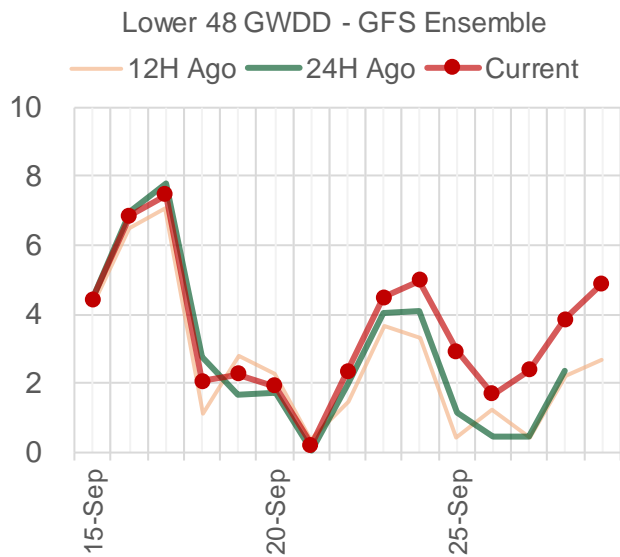
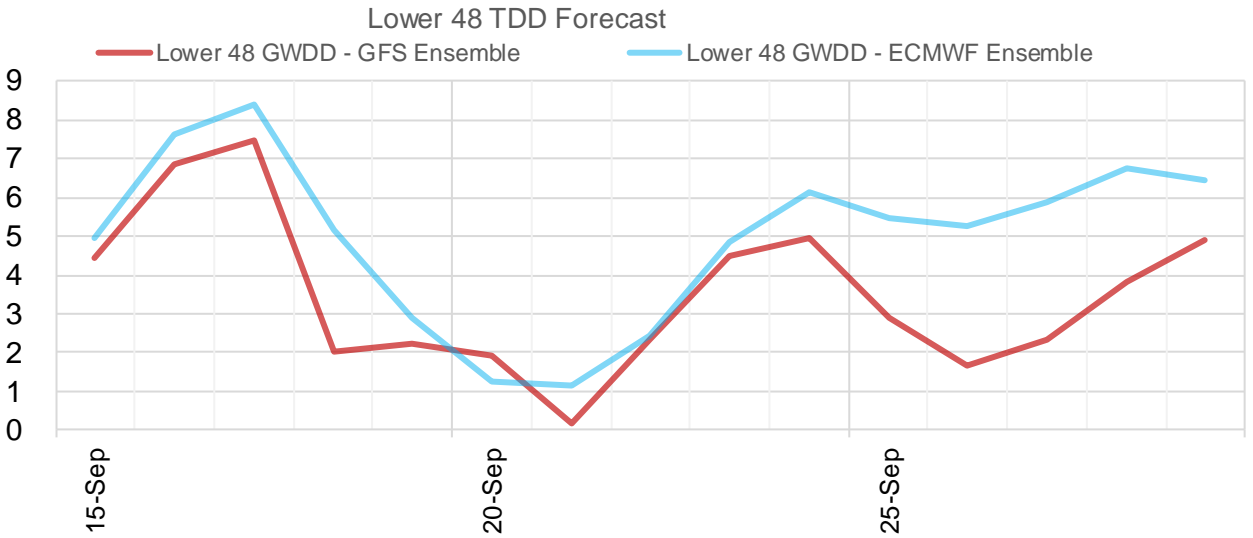
	Current	Δ from YD	Δ from 7D Avg
US ResComm	8.4	▲ 0.24	▼ -0.77

	Current	Δ from YD	Δ from 7D Avg
Canadian Imports	3.6	▼ -0.37	▼ -0.43

	Current	Δ from YD	Δ from 7D Avg
Net LNG Exports	7.2	▼ -0.03	▲ 0.33

	Current	Δ from YD	Δ from 7D Avg
Mexican Exports	6.4	▼ -0.01	▲ 0.14

## Short-term Weather Model Outlooks (00z)



Source: WSI , Bloomberg

## Lower 48 Component Models

### Daily Balances

	9-Sep	10-Sep	11-Sep	12-Sep	13-Sep	14-Sep	15-Sep	DoD	vs. 7D
<b>Lower 48 Dry Production</b>	<b>88.3</b>	<b>88.3</b>	<b>87.7</b>	<b>87.7</b>	<b>87.3</b>	<b>87.1</b>	<b>85.4</b>	▼ -1.7	▼ -2.4
<b>Canadian Imports</b>	<b>4.0</b>	<b>4.6</b>	<b>3.8</b>	<b>3.9</b>	<b>4.0</b>	<b>4.0</b>	<b>3.6</b>	▼ -0.4	▼ -0.5
L48 Power	36.1	37.2	34.9	31.9	32.4	34.3	34.0	▼ -0.3	▼ -0.5
L48 Residential & Commercial	11.0	10.8	9.2	7.6	7.3	8.2	8.4	▲ 0.2	▼ -0.6
L48 Industrial	20.0	19.8	19.7	19.4	19.3	19.3	19.5	▲ 0.2	▼ -0.1
L48 Lease and Plant Fuel	4.9	4.9	4.9	4.9	4.9	4.9	4.8	▼ -0.1	▼ -0.1
L48 Pipeline Distribution	2.2	2.3	2.1	1.9	1.9	2.0	2.0	▼ 0.0	▼ -0.1
<b>L48 Regional Gas Consumption</b>	<b>74.2</b>	<b>74.9</b>	<b>70.7</b>	<b>65.8</b>	<b>65.8</b>	<b>68.6</b>	<b>68.7</b>	▲ 0.0	▼ -1.3
<b>Net LNG Exports</b>	<b>6.8</b>	<b>6.9</b>	<b>6.4</b>	<b>7.2</b>	<b>7.6</b>	<b>7.3</b>	<b>7.2</b>	▼ 0.0	▲ 0.2
<b>Total Mexican Exports</b>	<b>6.2</b>	<b>6.3</b>	<b>6.2</b>	<b>6.0</b>	<b>5.9</b>	<b>6.4</b>	<b>6.4</b>	▼ 0.0	▲ 0.2
Implied Daily Storage Activity	5.0	4.9	8.1	12.6	11.9	8.8	6.7		
EIA Reported Daily Storage Activity									
Daily Model Error									

### EIA Storage Week Balances

	7-Aug	14-Aug	21-Aug	28-Aug	4-Sep	11-Sep	WoW	vs. 4W
<b>Lower 48 Dry Production</b>	<b>87.3</b>	<b>87.4</b>	<b>87.2</b>	<b>86.0</b>	<b>86.3</b>	<b>88.3</b>	▲ 2.1	▲ 1.6
<b>Canadian Imports</b>	<b>4.6</b>	<b>5.0</b>	<b>4.7</b>	<b>5.2</b>	<b>4.4</b>	<b>3.8</b>	▼ -0.6	▼ -1.0
L48 Power	40.7	42.9	40.0	41.6	37.2	35.1	▼ -2.1	▼ -5.3
L48 Residential & Commercial	8.1	8.1	8.2	8.3	7.7	8.8	▲ 1.0	▲ 0.7
L48 Industrial	18.8	19.0	20.4	19.6	19.7	19.7	▲ 0.0	▲ 0.0
L48 Lease and Plant Fuel	4.9	4.9	4.8	4.8	4.8	4.9	▲ 0.1	▲ 0.1
L48 Pipeline Distribution	2.2	2.3	2.2	2.3	2.1	2.1	▼ 0.0	▼ -0.2
<b>L48 Regional Gas Consumption</b>	<b>74.7</b>	<b>77.2</b>	<b>75.7</b>	<b>76.6</b>	<b>71.5</b>	<b>70.6</b>	▼ -0.9	▼ -4.6
<b>Net LNG Exports</b>	<b>3.9</b>	<b>4.4</b>	<b>4.7</b>	<b>3.9</b>	<b>3.0</b>	<b>5.2</b>	▲ 2.1	▲ 1.2
<b>Total Mexican Exports</b>	<b>6.1</b>	<b>6.0</b>	<b>6.2</b>	<b>6.6</b>	<b>6.5</b>	<b>6.4</b>	▼ -0.2	▲ 0.0
Implied Daily Storage Activity	7.2	4.8	5.3	4.1	9.5	10.0	0.4	
EIA Reported Daily Storage Activity	8.3	6.1	6.4	5.0	10.0			
Daily Model Error	-1.0	-1.3	-1.2	-0.9	-0.5			

### Monthly Balances

	2Yr Ago Sep-18	LY Sep-19	May-20	Jun-20	Jul-20	Aug-20	MTD Sep-20	MoM	vs. LY
<b>Lower 48 Dry Production</b>	<b>85.2</b>	<b>93.5</b>	<b>85.8</b>	<b>85.1</b>	<b>86.6</b>	<b>86.8</b>	<b>87.5</b>	▲ 0.6	▼ -6.0
<b>Canadian Imports</b>	<b>4.5</b>	<b>4.7</b>	<b>3.9</b>	<b>4.0</b>	<b>4.4</b>	<b>4.9</b>	<b>3.9</b>	▼ -1.0	▼ -0.8
L48 Power	34.2	36.4	26.9	34.8	43.8	40.6	35.2	▼ -5.3	▼ -1.1
L48 Residential & Commercial	8.5	8.3	12.9	9.0	8.6	8.1	8.4	▲ 0.3	▲ 0.1
L48 Industrial	21.6	22.3	18.9	18.3	17.8	19.5	19.6	▲ 0.1	▼ -2.6
L48 Lease and Plant Fuel	4.8	5.2	4.8	4.9	4.9	4.8	4.9	▲ 0.0	▼ -0.3
L48 Pipeline Distribution	2.0	2.1	1.9	2.0	2.4	2.2	2.1	▼ -0.2	▼ -0.1
<b>L48 Regional Gas Consumption</b>	<b>71.2</b>	<b>74.3</b>	<b>65.5</b>	<b>69.1</b>	<b>77.5</b>	<b>75.3</b>	<b>70.2</b>	▼ -5.1	▼ -4.1
<b>Net LNG Exports</b>	<b>3.1</b>	<b>6.2</b>	<b>6.7</b>	<b>4.0</b>	<b>3.3</b>	<b>4.0</b>	<b>5.5</b>	▲ 1.4	▼ -0.7
<b>Total Mexican Exports</b>	<b>5.1</b>	<b>5.4</b>	<b>4.9</b>	<b>5.7</b>	<b>6.1</b>	<b>6.3</b>	<b>6.4</b>	▲ 0.1	▲ 1.0
Implied Daily Storage Activity	10.3	12.4	12.6	10.2	4.1	6.1	9.3		
EIA Reported Daily Storage Activity									
Daily Model Error									

Source: Bloomberg, analytix.ai

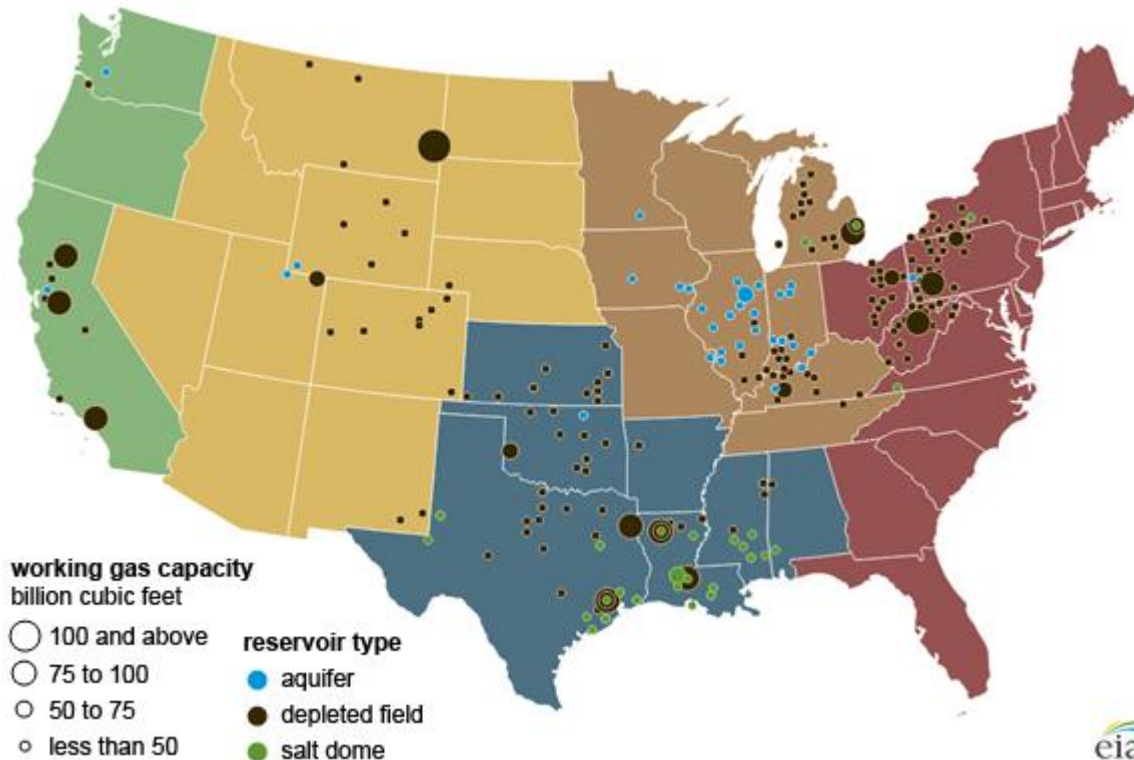
## Regional S/D Models Storage Projection

Week Ending 11-Sep

	Daily Raw Storage	Daily Adjustment Factor	Daily Average Storage Activity (Adjusted) *	Weekly Adjusted Storage Activity
L48	9.7	1.0	10.7	73
East	0.9	1.4	2.3	15
Midwest	3.7	0.4	4.0	27
Mountain	3.4	-2.9	0.5	4
South Central	0.9	2.7	3.6	25
Pacific	0.8	-0.5	0.3	2

\*Adjustment Factor is calculated based on historical regional deltas

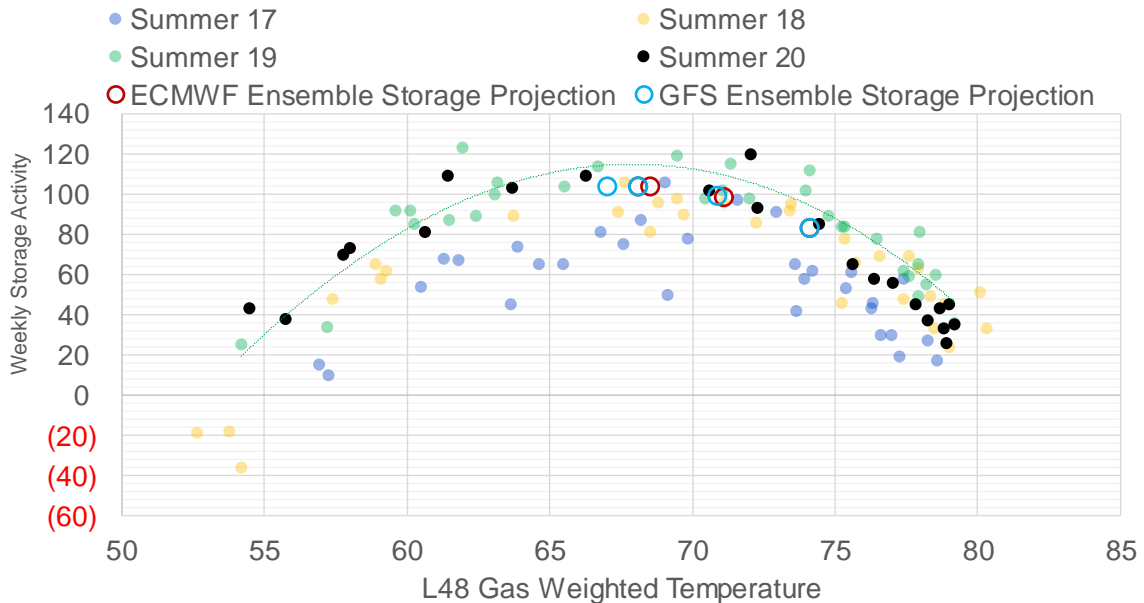
U.S. underground natural gas storage facilities by type (July 2015)



## Weather Model Storage Projection

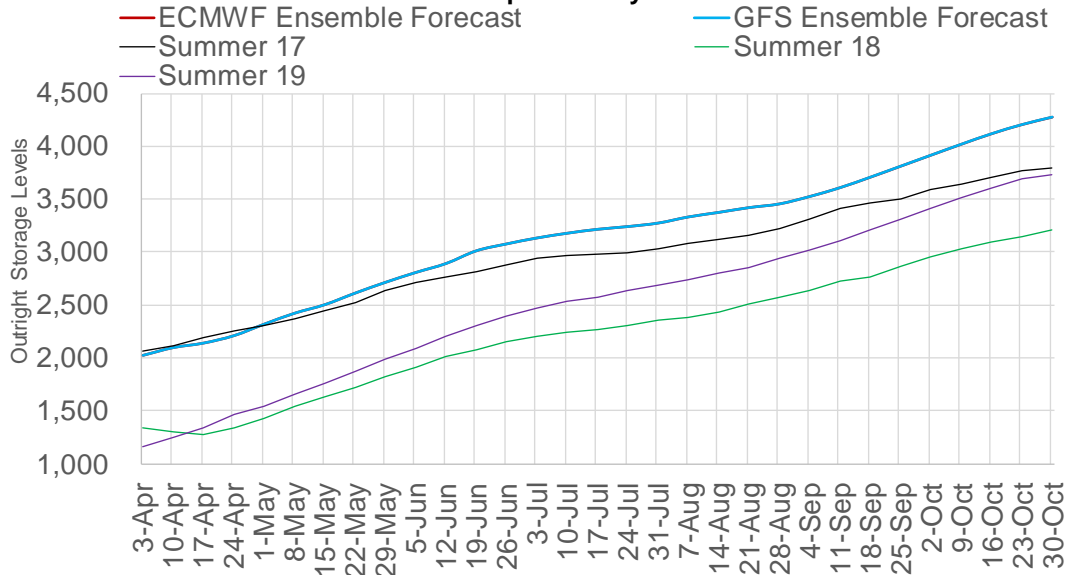
Next report and beyond	
Week Ending	Week Storage Projection
18-Sep	99
25-Sep	104
2-Oct	104

### Weather Storage Model - Next 4 Week Forecast



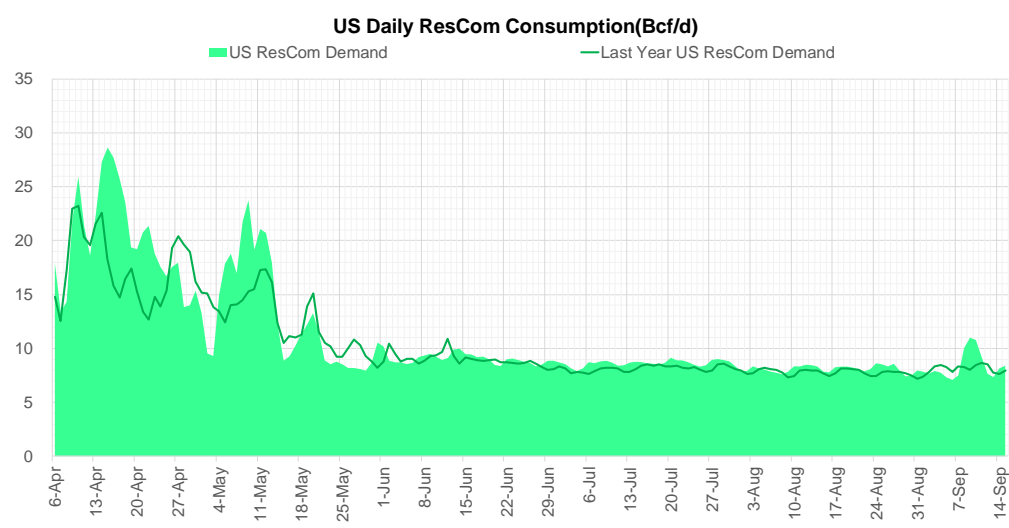
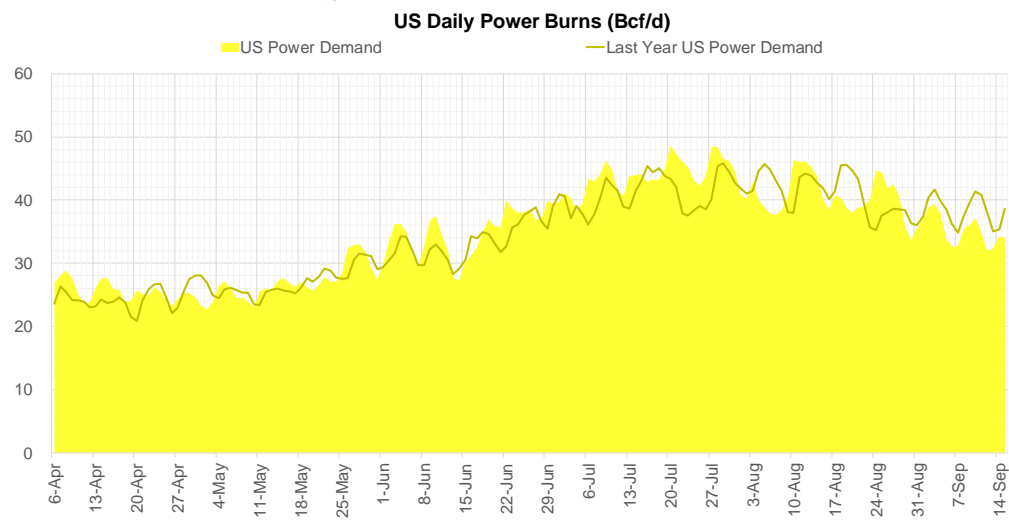
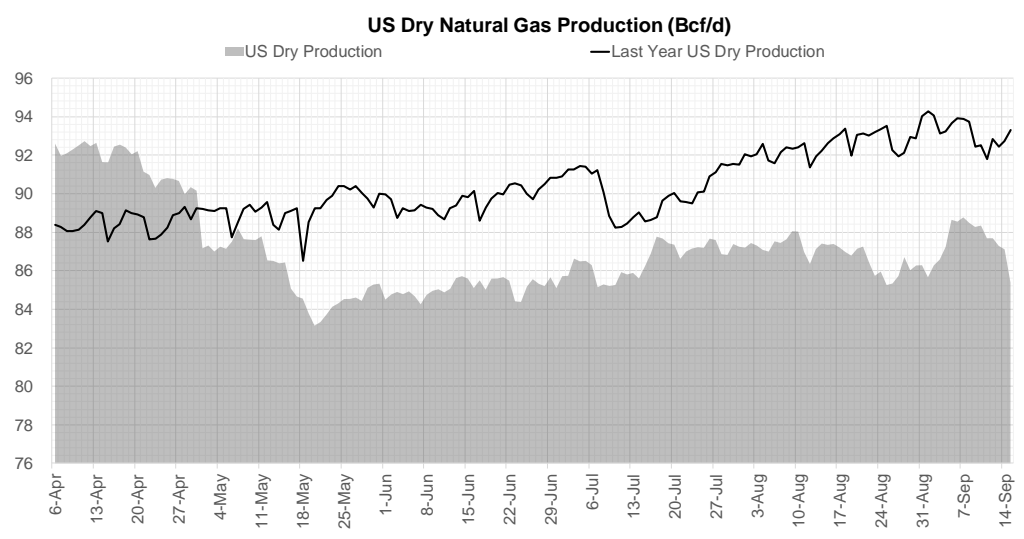
### Weather Based End of Winter Projection (Bcf)

10Y normals past 15 day forecast window



The risk of trading futures and options and other derivatives involves a substantial risk of loss and is not suitable for all persons. Each person must consider whether a particular trade, combination of trades, or strategy is suitable for that person's financial means and objectives. Past results are not necessarily indicative of future results. This communication may contain links to third party websites which are not under the control of and are not maintained by ION Energy Group, and ION Energy Group is not responsible for their content.

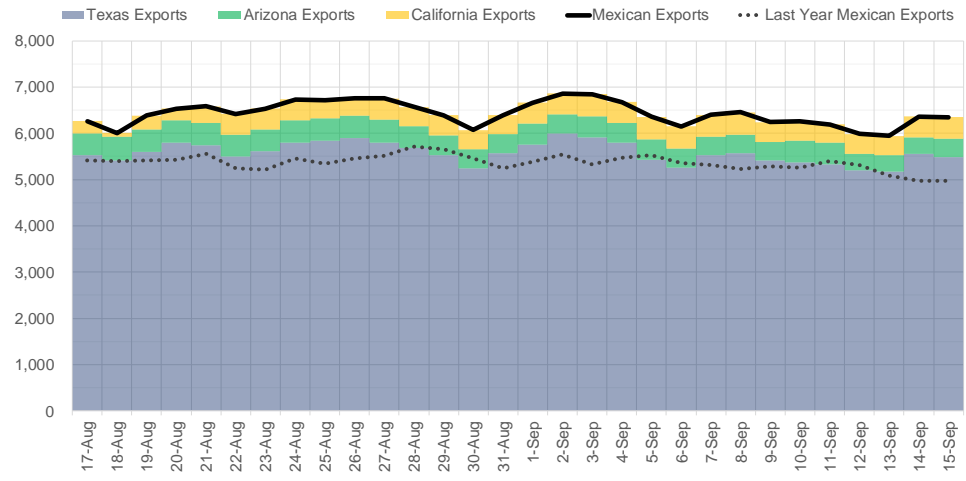
## Supply – Demand Trends



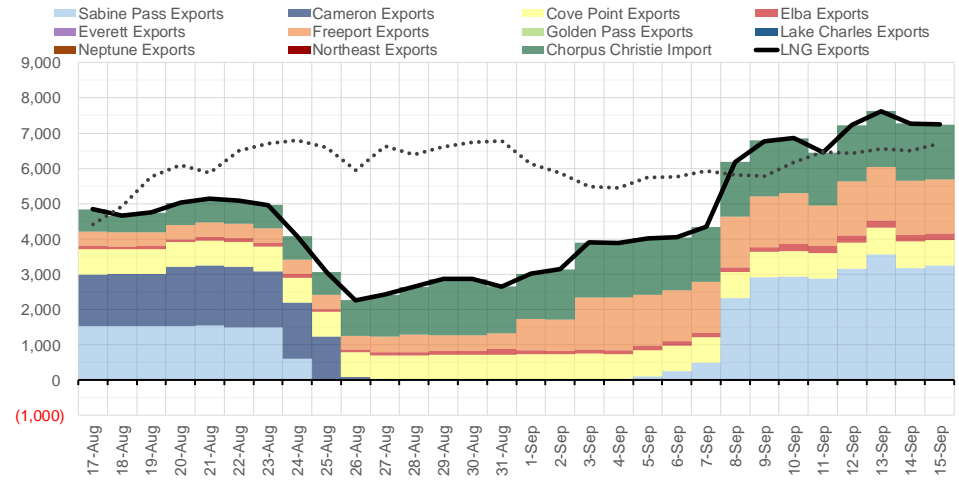
Source: Bloomberg

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**Mexican Exports - Last 30 days (MMcf/d)**



**Net LNG Exports - Last 30 days (MMcf/d)**



Source: Bloomberg

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## Nat Gas Options Volume and Open Interest CME, ICE and Nasdaq Combined

CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE VOL	CONTRACT MONTH	CONTRACT YEAR	PUT/CALL	STRIKE	CUMULATIVE OI
10	2020	P	2.00	29353	10	2020	P	2.00	50395
10	2020	P	2.25	7710	10	2020	C	3.00	45390
10	2020	P	2.05	7219	10	2020	P	1.50	44387
10	2020	C	3.00	7194	10	2020	C	2.75	43714
10	2020	P	2.15	6831	10	2020	P	2.25	36760
10	2020	P	2.10	6311	10	2020	P	1.60	34511
11	2020	C	4.50	4876	3	2021	P	2.00	33139
11	2020	C	5.00	4604	10	2020	C	2.50	33116
10	2020	C	2.75	4340	10	2020	P	1.75	32413
10	2020	P	1.80	3972	4	2021	C	5.00	29687
10	2020	C	2.50	3490	10	2020	P	1.25	28902
12	2020	P	2.50	3433	11	2020	C	3.50	27331
10	2020	C	2.70	3128	11	2020	P	2.00	26019
10	2020	P	2.20	2761	3	2021	C	3.25	25920
11	2020	C	3.50	2494	3	2021	C	4.00	25239
11	2020	P	2.50	2411	10	2020	C	3.25	24185
11	2020	P	2.25	2272	10	2020	P	2.10	24022
11	2020	C	3.00	2231	10	2020	P	1.00	24016
10	2020	C	2.65	2109	1	2021	C	3.50	23348
10	2020	C	2.60	1954	1	2021	C	4.50	23165
11	2020	C	3.25	1491	12	2020	P	2.00	23020
10	2020	C	2.35	1485	11	2020	C	5.00	23007
1	2021	P	2.25	1400	10	2020	P	1.80	22411
10	2020	P	1.85	1369	10	2020	C	2.10	21984
3	2021	P	2.40	1200	10	2020	P	1.90	21807
11	2020	C	3.75	1162	10	2020	P	2.20	21624
10	2020	P	2.30	1080	3	2021	C	3.00	21586
10	2020	C	2.85	1021	11	2020	P	2.25	20748
10	2020	C	3.25	1003	3	2021	C	6.00	20555
1	2021	C	3.75	1000	11	2020	P	2.50	19529
10	2020	P	1.90	915	10	2020	P	1.30	19457
3	2021	P	2.00	875	3	2021	C	3.50	19231
10	2020	C	2.40	855	10	2020	C	3.50	18826
2	2021	C	4.00	850	10	2020	C	2.00	18663
1	2021	C	3.25	800	1	2021	C	5.00	18330
1	2021	C	4.50	750	11	2020	C	3.25	18077
10	2020	P	2.35	710	2	2021	C	5.00	17296
1	2021	C	5.00	707	11	2020	C	3.00	16798
2	2021	C	5.00	700	1	2021	C	3.75	16796
3	2021	C	5.00	700	1	2021	C	3.00	16784
3	2021	P	2.25	700	10	2020	C	2.25	16520
10	2020	P	2.40	674	10	2020	P	1.40	15907
4	2021	C	4.00	650	10	2020	C	2.40	15878
5	2021	C	4.00	650	12	2020	P	2.50	15256
10	2020	P	1.60	553	10	2020	C	2.60	15140
11	2020	P	2.65	533	12	2020	C	4.00	15113
12	2020	C	3.50	502	11	2020	C	4.00	14879
2	2021	C	3.50	500	1	2021	P	2.25	14379
10	2020	P	1.50	496	12	2020	C	3.75	14308
					11	2020	P	2.65	14152.5

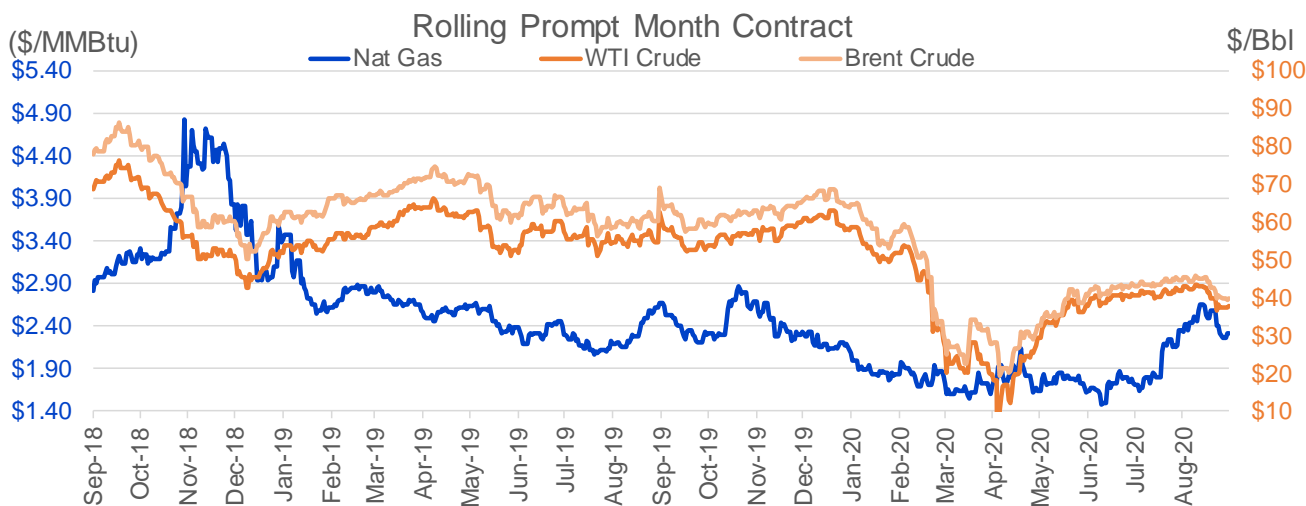
Source: CME, Nasdaq, ICE

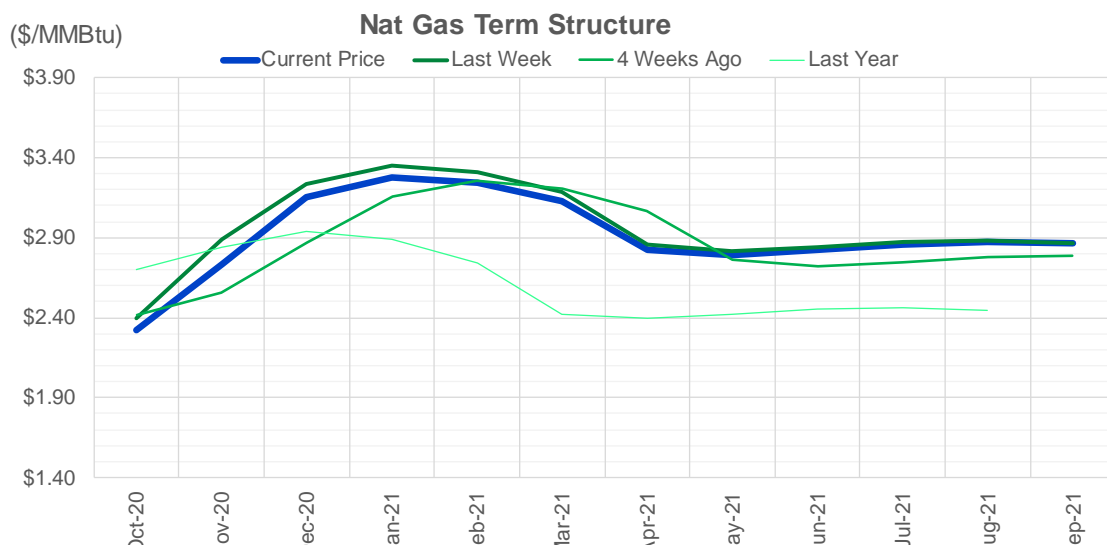


## Nat Gas Futures Open Interest CME, and ICE Combined

CME Henry Hub Futures (10,000 MMBtu)				ICE Henry Hub Futures Contract Equivalent (10,000 MMBtu)			
	Current	Prior	Daily Change	FOR JUNE 26	Current	Prior	Daily Change
OCT 20	129988	142643	-12655	OCT 20	84189	87958	-3768.75
NOV 20	245735	230218	15517	NOV 20	79989	80275	-286.5
DEC 20	112682	108327	4355	DEC 20	73749	74176	-426.5
JAN 21	138175	134667	3508	JAN 21	88102	89027	-925
FEB 21	55675	56024	-349	FEB 21	58911	58972	-60.5
MAR 21	115128	111365	3763	MAR 21	78078	77951	127
APR 21	77600	77065	535	APR 21	64403	64244	158.25
MAY 21	47363	46979	384	MAY 21	56978	56718	260.25
JUN 21	29225	29602	-377	JUN 21	51023	51001	21.75
JUL 21	20890	20651	239	JUL 21	53602	53441	161.75
AUG 21	22174	22033	141	AUG 21	53478	53268	210
SEP 21	27918	27915	3	SEP 21	50252	50044	207.75
OCT 21	69152	67867	1285	OCT 21	74613	74384	228.5
NOV 21	27050	27156	-106	NOV 21	42751	42658	93
DEC 21	24200	24078	122	DEC 21	42941	42816	124.25
JAN 22	22976	22669	307	JAN 22	36511	36488	23.75
FEB 22	13024	12827	197	FEB 22	32044	32001	42.75
MAR 22	17741	17684	57	MAR 22	33900	33848	51.75
APR 22	21782	20956	826	APR 22	33906	33911	-4.5
MAY 22	6269	6141	128	MAY 22	24832	24750	82
JUN 22	3611	3627	-16	JUN 22	24032	24036	-4.5
JUL 22	2985	2990	-5	JUL 22	25153	25088	65
AUG 22	1978	1954	24	AUG 22	24373	24378	-4.75
SEP 22	2164	2078	86	SEP 22	23424	23428	-4.5
OCT 22	3162	3217	-55	OCT 22	24715	24647	68
NOV 22	2373	2382	-9	NOV 22	22331	22318	13.5
DEC 22	2309	2293	16	DEC 22	24515	24501	14
JAN 23	2873	2873	0	JAN 23	12448	12445	2.75
FEB 23	858	858	0	FEB 23	11450	11441	9.5
MAR 23	901	900	1	MAR 23	11870	11905	-34.75

Source: CME, ICE





	Oct-20	Nov-20	Dec-20	Jan-21	Feb-21	Mar-21	Apr-21	May-21	Jun-21	Jul-21	Aug-21	Sep-21
<b>Current Price</b>	<b>\$2.318</b>	<b>\$2.730</b>	<b>\$3.154</b>	<b>\$3.278</b>	<b>\$3.241</b>	<b>\$3.126</b>	<b>\$2.827</b>	<b>\$2.791</b>	<b>\$2.822</b>	<b>\$2.860</b>	<b>\$2.872</b>	<b>\$2.863</b>
Last Week	\$2.400	\$2.892	\$3.235	\$3.352	\$3.313	\$3.187	\$2.858	\$2.815	\$2.839	\$2.871	\$2.880	\$2.868
vs. Last Week	-\$0.082	-\$0.162	-\$0.081	-\$0.074	-\$0.072	-\$0.061	-\$0.031	-\$0.024	-\$0.017	-\$0.011	-\$0.008	-\$0.005
4 Weeks Ago	\$2.417	\$2.556	\$2.870	\$3.157	\$3.257	\$3.203	\$3.064	\$2.766	\$2.718	\$2.743	\$2.776	\$2.784
vs. 4 Weeks Ago	-\$0.099	\$0.174	\$0.284	\$0.121	-\$0.016	-\$0.077	-\$0.237	\$0.025	\$0.104	\$0.117	\$0.096	\$0.079
Last Year	\$2.668	\$2.700	\$2.840	\$2.940	\$2.886	\$2.739	\$2.424	\$2.392	\$2.422	\$2.457	\$2.460	\$2.443
vs. Last Year	-\$0.350	\$0.030	\$0.314	\$0.338	\$0.355	\$0.387	\$0.403	\$0.399	\$0.400	\$0.403	\$0.412	\$0.420

	Units	Cash Settled	Prompt Settle	Cash to Prompt
AGT Citygate	\$/MMBtu	1.35	1.63	0.28
TETCO M3	\$/MMBtu	1.22	1.30	0.08
FGT Zone 3	\$/MMBtu	1.25	2.39	1.14
Zone 6 NY	\$/MMBtu	1.25	1.10	-0.15
Chicago Citygate	\$/MMBtu	1.93	2.06	0.13
Michcon	\$/MMBtu	1.89	1.93	0.04
Columbia TCO Pool	\$/MMBtu	1.70	1.50	-0.20
Ventura	\$/MMBtu	1.89	2.08	0.19
Rockies/Opal	\$/MMBtu	2.26	1.90	-0.36
El Paso Permian Basin	\$/MMBtu	1.89	1.58	-0.31
Socal Citygate	\$/MMBtu	2.65	2.32	-0.33
Malin	\$/MMBtu	2.25	2.18	-0.07
Houston Ship Channel	\$/MMBtu	2.19	2.34	0.15
Henry Hub Cash	\$/MMBtu	2.18	2.08	-0.10
AECO Cash	C\$/GJ	1.82	1.82	0.00
Station2 Cash	C\$/GJ	1.87	2.34	0.47
Dawn Cash	C\$/GJ	1.91	1.96	0.05

Source: CME, Bloomberg

	Units	Current Price	vs. Last Week	vs. 4 Weeks		vs. Last Year
				Ago		
NatGas Jan/Apr	\$/MMBtu	-0.45	▲ 0.046	▲ 0.043	▲ 0.020	
NatGas Mar/Apr	\$/MMBtu	-0.296	▲ 0.033	▼ -0.594	▼ -0.575	
NatGas Oct/Nov	\$/MMBtu	0.41	▼ -0.080	▲ 0.098	▲ 0.362	
NatGas Oct/Jan	\$/MMBtu	0.96	▲ 0.008	▲ 0.259	▲ 0.641	
WTI Crude	\$/Bbl	37.76	▲ 1.000	▼ -5.130	▼ -21.580	
Brent Crude	\$/Bbl	40.03	▲ 0.250	▼ -5.430	▼ -24.520	
Fuel Oil, NY Harbour 1%	\$/Bbl	98.03	▲ 0.000	▲ 0.000	▲ 0.000	
Heating Oil	cents/Gallon	109.07	▲ 1.390	▼ -16.970	▼ -89.890	
Propane, Mt. Bel	cents/Gallon	0.48	▲ 0.020	▼ -0.021	▲ 0.022	
Ethane, Mt. Bel	cents/Gallon	0.21	▲ 0.012	▼ -0.035	▼ -0.016	
Coal, PRB	\$/MTon	12.30	▲ 0.000	▲ 0.000	▲ 0.150	
Coal, ILB	\$/MTon	31.05	▲ 0.000	▲ 0.000	▼ -4.500	